

**Work Order ID 61507**

Monday, August 30, 2010 8:14:18 AM

Page 1

Item ID: D206-667-203

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Aft

Start Date: 8/30/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 9/6/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D206-667-243

Rev C

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-203 CHG003

S 10/02/09

110

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF

IX

D

MB 10-09-16

120

QC15- Crosstube Dimensional Check

0.00



QC

Memo

0.00

Quality Control

S 10/02/16

X0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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**NOTE:** Date & initial all entries

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130



0.00

Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 and drill table DT8577. Locate hole #6 for towers as per QSI 10. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243 Inside of Cuff(Donot engrave on outside of tube)

10 -Deburr & Inspect for surface damage. Repair damage within limits as per

MB  
10-09-20

DP 10-9-20

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Dwg  
D206-667-243

140



HandFXtube

Crosstubes Chemical Conversion

0.00

Hand Finishing Crosstubes

Memo

0.00

DD 10-9-20

150



QC

QC3- Inspect Part Finish

0.00

Quality Control

Memo

0.00

8/30/2010

160



QC

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

Memo

0.00

8/30/2010

(46)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 	Outsource process - NDT per QSI038 4.1	0.00							
Outsource2	<b>Memo</b>	0.00							CZ 10/9/22 ①
Outsource process - NDT	Liquid Penetrant Inspection as per QSI 038Or Issue P/O: <u>12615</u> LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order								
180 	Packaging	0.00							
Packaging	<b>Memo</b>	0.00							CZ 10/9/22 ①
Packaging	Ensure copy of NDT results attached to work order.								
190 	QC5- Inspect part completeness to step on W/O	0.00							
QC	<b>Memo</b>	0.00							ml 10 09 22 ①
Quality Control	Ensure results are as per Dwg D206-667-243								

W/O:		WORK ORDER CHANGES					
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
	SprayPaint					<u>ml</u>	<u>10</u>	<u>09</u>	<u>27</u> ①
SprayPaint	Memo	0.00							
Spray Painting	1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube with White Imron as per QSI 005 4.2  PRIME: Start Time: <u>9:30</u> Fininsh Time: <u>10:30</u>  PAINT: Start Time: <u>2:30</u> Finish Time: <u>3:30</u>								
210		0.00							
	QC14- Inspect Spray Paint					<u>1</u>			<u>005-28</u>
QC	Memo	0.00							
Quality Control	Wrap in plastic bag to protect from scratches								

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220  Crosstubes	Crosstubes	0.00				<u>ml</u>	<u>10</u>	<u>09</u>	<u>28</u> ①
Crosstubes	<b>Memo</b>	0.00							
Crosstubes	1-Install nut plates as per Dwg D206-667-243.								
230  Crosstubes	Skidtubes	0.00				<u>ml</u>	<u>10</u>	<u>09</u>	<u>28</u> ①
Crosstubes	<b>Memo</b>	0.00							
Crosstubes	1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (3) top holes should be facing up. A/R Magnobond 6398 : <u>114158 exp:01/2011</u>								
Crosstubes	2-Install supports and clamps as per Dwg D206-667-243. Torque clamps to 80-100 in lb <u>ml 10.09.29</u> ①								

W/O:		WORK ORDER CHANGES					
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Customer:

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00		810102/29					
250  Packaging Packaging	Pick Kit  Memo	0.00 0.00					10/9/09		
260  QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00 0.00		810102/29					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	Packaging								
Packaging	<b>Memo</b>	0.00							
Packaging	Identify and pack for shipping as per PPP D206-667-203								
	Location: _____								
	PPP Rev: <u>D</u>								
280	QC21- Final Inspection - Work Order Release	0.00							
QC	<b>Memo</b>	0.00							
Quality Control									

*PC 11/2/09*

*10/09/30*  
*CMF*  
*10-9-29*

W/O:		WORK ORDER CHANGES					
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# Picklist Print

Monday, August 30, 2010 8:14:25 AM

Page 1

Work Order ID: 61507

Parent Item: D206-667-203

Parent Item Name: Crosstube Aft



Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:F 05.09.01 Add holes for compatibility with Bell Skidtubes KJ/JLM  
 IPP Rev:G 08-06-03 update as per DSI9415 (ECN1198) DD verified by:ec  
 IPP Rev:H 08-07-18 remove thread masking in step 12 DD verified by:EC  
 IPP Rev:I 08-12-15 add magnobond DD verified by:EC  
 IPP Rev J 09.01.06 ECN 08-562 EC verified by:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D206-667-203TRN		Manufactured	No			220	Each	0.0000	1	1			

Crosstube Turning Detail

D2873-043		Manufactured	No			220	Each	48.0000	2	2			

Nut Plate Assembly

Location	Loc Qty	Loc Code
LG	28	
53966	6	
56466	2	
57337	20	
ST	20	
60981	20	

D2873-045		Manufactured	No			220	Each	44.0000	2	2			

Nut Plate Assembly

Location	Loc Qty	Loc Code
LG	44	
53968	5	
57336	19	
60982	20	

B-61446 MB 10-09-16

ml 10 09 28

ml 10 09 28

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Parent Item: D206-667-203



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Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

D2892-1  
Support  
Manufactured No

230 Each 48.0000 2 2



*ml 10-09-28*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	48	
41986	12	
42785	20	
<u>53124</u>	11	
55787	5	

D3595-063-450  
RUBBER CUSHION  
Manufactured No

230 Each 68.6590 4 4



*ml 10-09-28*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	68.65897368	
53775	5.97897368	
58161	3.56	
59580	10.12	
<u>60983</u>	49	

MS20601-AD4W10  
RIVET  
Purchased No

230 Each 172.0000 14 14



*ml 10-09-28*

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG051	158	
114245	58	
<u>115405</u>	100	
ST322	14	
113220	14	

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Start Date: 8/30/2010

Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

MS21920-22

Purchased

No

230

Each

94.0000

4

4



Clamp(per MIL-DTL-8783C)



*m/ 10-09-28*

Location

Loc Qty

Loc Code

LG

94

114077

94

AN5-10A

Purchased

No

250

Each

175.0000

10

10



Bolt



*10/9/09 SF*

Location

Loc Qty

Loc Code

ST337

175

114752

25

115108

100

115429

50

AN5-32A

Purchased

No

250

Each

196.0000

4

4



Bolt



*10/9/09 SF*

Location

Loc Qty

Loc Code

ST340

196

113121

4

114056

42

114405

50

115016

50

115108

50

AN5-34A

Purchased

No

250

Each

80.0000

4

4



Bolt



*10/9/09 SF*

Location

Loc Qty

Loc Code

ST340

80

113149

30

113226

50

W/O:		WORK ORDER CHANGES					
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Required Date: 9/6/2010

Start Qty: 1.00

Required Qty: 1.00

AN960JD516 NAS1149D0563J Purchased

No

250

Each

34.0000

18

18



1114742 10/9/09 sf

Washer

## Location

## Loc Qty

## Loc Code

ST

34

103694

18

107534

12

109287

4

MS21042L5

Purchased

No

250

Each

645.0000

4

4



10/9/09 sf

Nut

## Location

## Loc Qty

## Loc Code

ST139

145

114813

145

ST300

500

115156

500

Y

Monday, August 30, 2010 8:14:25 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

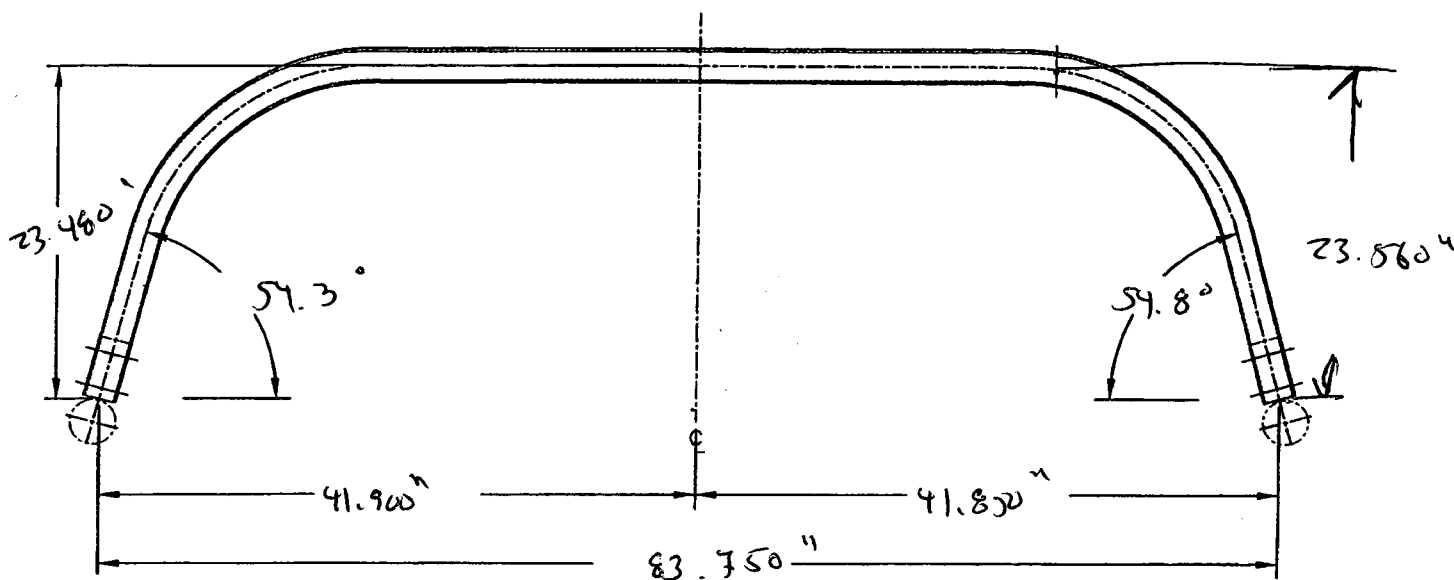
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	61507
<b>Description:</b> Crosstube High Aft (206L)		<b>Part Number:</b>	D206-667-203
<b>Inspection Dwg:</b> D206-667-243 <b>Rev:</b> C		<b>Page 1 of 1</b>	

Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.1



Comments

QC15 Inspection	8
Date	10/09/16

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.11.17	Dwg Rev updated	KJ	
C	09.12.14	Dimensions update per Dwg Rev C	KJ	

Item	Qty	Part Number	Description
	-243		
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

# **GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6004-115  
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON  
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY,  
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE  
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND-6398 PER  
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE  
D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE  
LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN  
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 61507

*2810-8-30*

**RELEASED**  
*6/11/2007*

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	<i>RF</i>		
CHECKED	<i>RF</i>		
MFG. APPR.	<i>RF</i>		
APPROVED	<i>RF</i>		
DE APPR.	<i>RF</i>		
DATE	08.11.06		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. D206-667-243 REV. C SHEET 1 OF 4 TITLE CROSSTUBE ASSY (206L HIGH AFT) SCALE NTS COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



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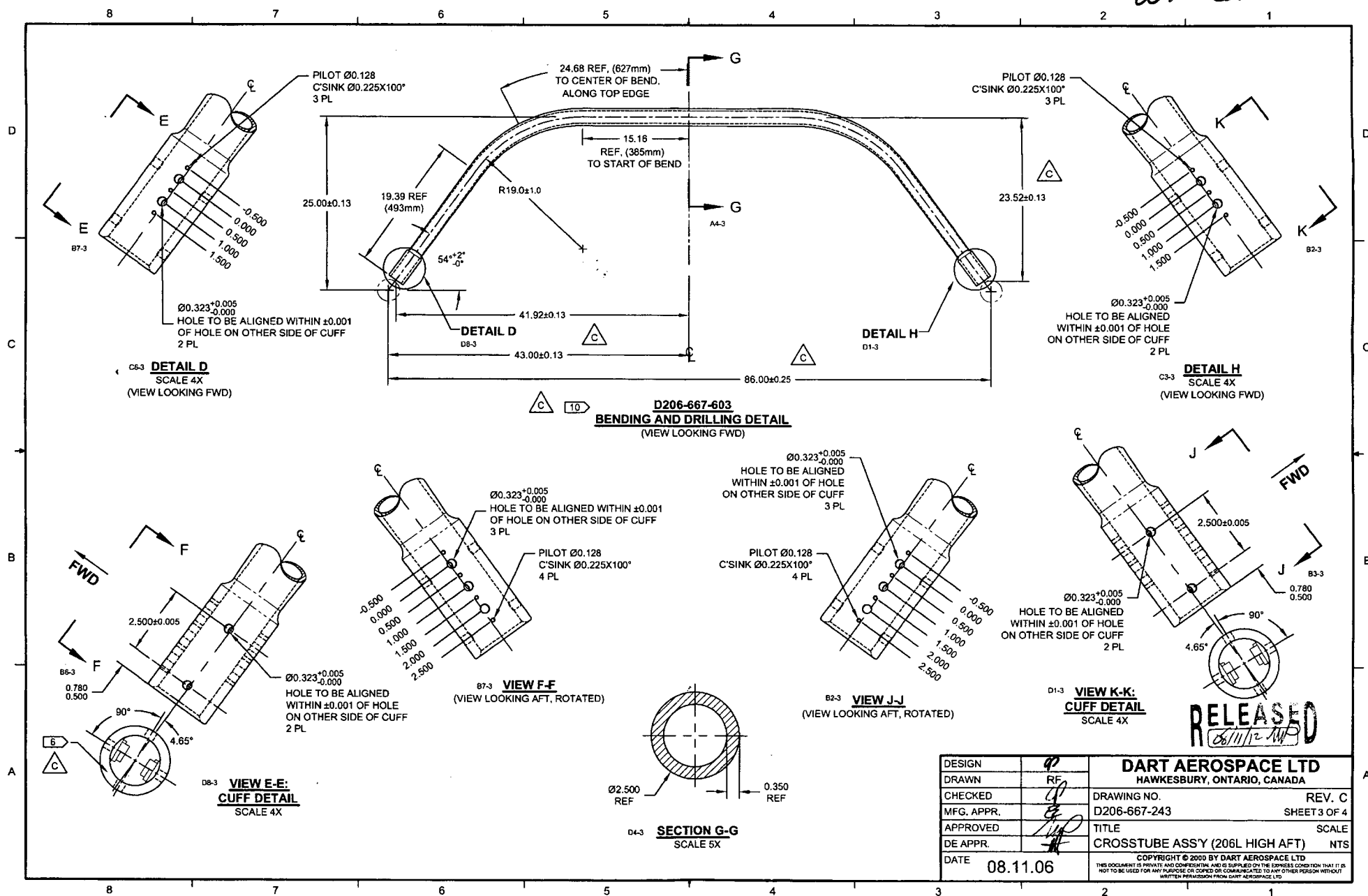
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WLO 61507



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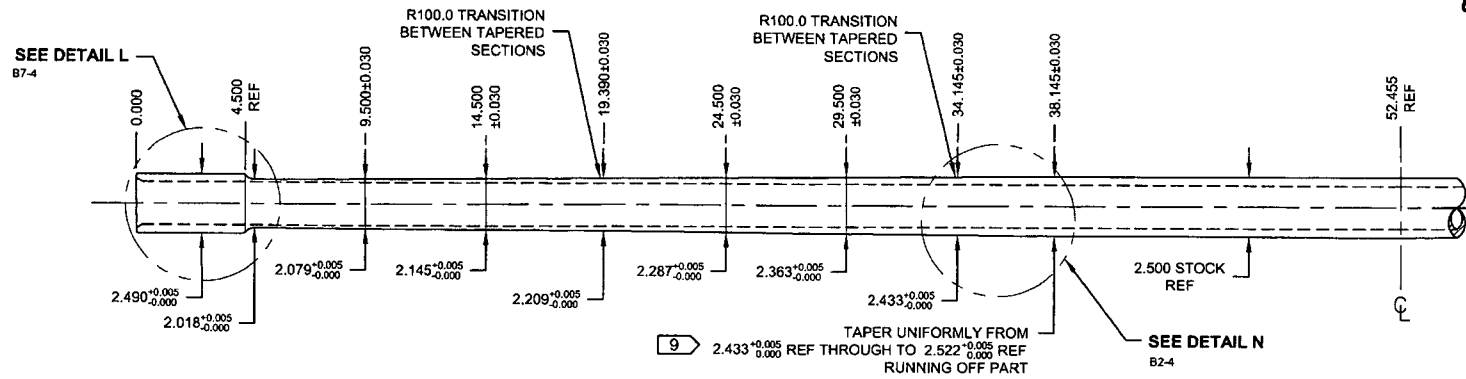
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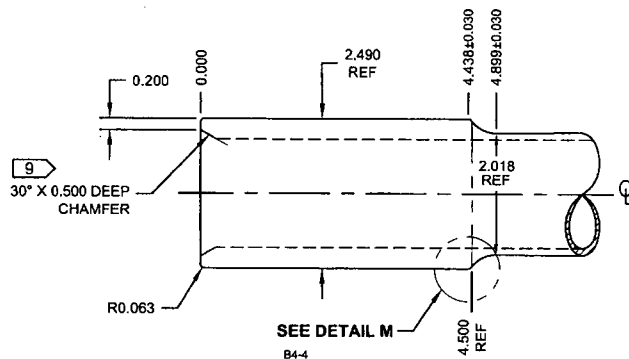
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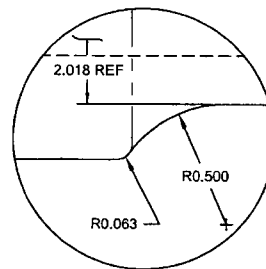
W1661507



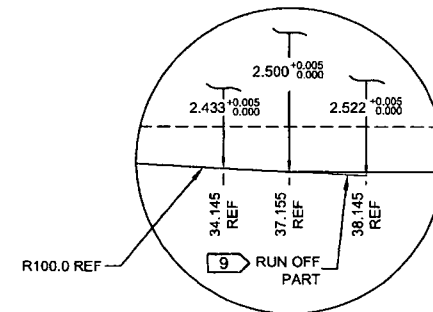
**TURNING DETAIL**



**DETAIL L: CROSSTUBE CUFF**  
NOT TO SCALE



**DETAIL M: CUFF TRANSITION**  
NOT TO SCALE



**DETAIL N: TAPER RUN-OFF**  
NOT TO SCALE

**RELEASED**  
08/11/2006

DESIGN	9	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	9	DRAWING NO.	REV. C
MFG. APPR.	9	D206-667-243	SHEET 4 OF 4
APPROVED	9	TITLE	SCALE
DE APPR.	9	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



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## LIQUID PENETRANT TEST REPORT

P- 15193.

PAGE 1 OF 1

CLIENT DACT Aerospace DATE SEPT-21-2010 TIME AM ☒ PM ☐  
ATTENTION LINDA / CHANTREL ACUREN JOB No. 188-10-0889  
ADDRESS 1270 ABELEEN ST. PO/WO No. 12615  
HAWKES BURY, ON. WORK LOCATION HAWKES BURY PLANT  
ACCEPTANCE STD. ASTM 1417 REV./DATE 2005  
PROJECT F. P. I. (10) ON CROSS TUBES &  
ITEM(S) EXAMINED (7) MACHINED PARTS

JOB DESCRIPTION PROCEDURE No. LT0002 REV./DATE TECHNIQUE No. LT-1417-2 REV./DATE  
PART No. MATERIAL STAINLESS STEEL THICKNESS  
SCOPE WET FLUORESCENT LIQUID PENETRANT 2 + 2 ALUMINUM ALUMINUM  
INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE

TEST DETAILS  
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED  
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 16459 ☐ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT < 2 fc  
PENETRANT ZL67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE  
PENETRANT REMOVER H2O MINIMUM DRY TIME 5 MIN. OTHER L.A.S. NO  
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1298866 CAL DUE DATE OCT 17  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE  
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL  
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/ 50°F ☒ 10°C/ 50°F TO 52°C/ 125°F ☐ > 52°C/ 125°F

RESULTS- ☒ METRIC ☐ IMPERIAL

7 SLEEVE'S → W.O. 62188 ✓  
1 CROSS TUBE → W.O. 61298 ✓  
1 CROSS TUBE → W.O. 61299 ✓  
1 CROSS TUBE → W.O. 61418 ✓  
1 CROSS TUBE → W.O. 61417 ✓  
1 CROSS TUBE → W.O. 61959 ✓  
1 CROSS TUBE → W.O. 61958 ✓  
1 CROSS TUBE → W.O. 61952 ✓  
1 CROSS TUBE → W.O. 61953 ✓  
1 CROSS TUBE → W.O. 61507 ✓  
1 CROSS TUBE → W.O. 61508 ✓  
INDICATIONS ON CROSSTUBES  
W.O. #'S → 61852, 61853.  
10-08-27

Scope of Services  
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.  
Standard of Care  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES  
CLIENT REPRESENTATIVE Eric Downing DTR # E63391  
TECHNICIAN (SIGNATURE): Mike / J. Hester REPORT REVIEWED BY:  
NAME (PRINT): Mike / J. Hester NAME INITIALS  
1<sup>ST</sup> TECHNICIAN 2<sup>ND</sup> TECHNICIAN  
CGSB LEVEL 2 SNT LEVEL 2 CGSB LEVEL 2 SNT LEVEL 2  
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